

SPECIES OF THE GENUS *RAINIERIA* RONDANI FROM CHINA (DIPTERA, MICROPEZIDAE)

LI Xuan-Kun, LIU Xing-Yue, YANG Ding*

Department of Entomology, China Agricultural University, Beijing 100193, China

Abstract The genus *Rainieria* Rondani is newly recorded from Chinese mainland with two species. *Rainieria trisetata* sp. nov. is described as new to science, and *R. leucochira* Czerny is redescribed. A key to the species of *Rainieria* from China is presented.

Key words Diptera, Micropezidae, *Rainieria*, new species, China.

1 Introduction

The genus *Rainieria* Rondani, 1843 is a large genus with 37 known species. According to the number of frontal bristles, Marshall (2010) divided it into two subgenera: *Rainieria* with one frontal bristle and *Rainieriella* with two frontal bristles. In present paper, we described an unusual species with three frontal bristles.

The genus *Rainieria* is widely distributed, but did not be recorded in Australian and Afrotropical realms. There are three known species from Palaearctic realm (Soós, 1984) and two known species from Oriental realm (Steyskal, 1977). In China, only one species, *R. leucochira* Czerny, was known from Taiwan before. Here the genus is recorded from Chinese Mainland for the first time with 2 species.

2 Material and Methods

The specimens were studied and illustrated with ZEISS Stemi 2000-c. Genitalic preparations were made by heating the apical portion of the abdomen in lactic acid at 180 °C for 15–25 min. After examination it was transferred to fresh glycerine and stored in a microvial pinned below the specimen. Type specimens examined are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.

3 Taxonomy

Genus *Rainieria* Rondani

Rainieria Rondani, 1843: 40. Type species: *Calobata calceata* Fallén.

Diagnosis. Body mainly brownish black. Head with 1 postvertical bristle, 1 inner vertical bristle, 1 outer vertical bristle, 1 orbital bristle, 1 to 3 frontal bristles; frontal vitta often less than half as wide as frons. Thorax with 2 notopleural bristles, 1 dorsocentral bristle, 1 supra-alar bristle, 1 postalar bristle, 1 apical scutellar bristle; hypopleuron with some long and strong bristles. Tarsi short, less than half of tibia. Wing hyaline with grayish brown bands.

Anal cell short, vein CuA_2 distinctly shorter than vein $A_1 + CuA_2$; crossvein CuA_2 slightly sinuate; vein $A_1 + CuA_2$ reaching wing margin. Abdomen mostly brown; tergites mostly dark and microsetulose; epandrium without surstylus.

Distribution. Palaearctic, Oriental, Nearctic, and Neotropical realms.

Key to species of *Rainieria* from China.

1. Mid and hind femora yellowish brown with middle brown ring; wing with narrow grayish brown middle band, apical band indistinct; crossvein $bm-cu$ connected with CuA_2 ; 2 frontal bristles present; genital fork of sternite 5 longer than basal portion of sternite 5 *Rainieria leucochira* Czerny
- Mid and hind femora brown with basal and apical yellowish brown ring; wing with wide grayish brown middle band and apical band; crossvein $bm-cu$ not connected with CuA_2 , but more close to wing base; 3 frontal bristles present; genital fork of sternite 5 nearly as long as basal portion of sternite 5 *Rainieria trisetata* sp. nov.

Rainieria leucochira Czerny, 1932 (Figs 1–4, 9–10)

Rainieria leucochira Czerny, 1932: 274. Type locality: China (Taiwan).

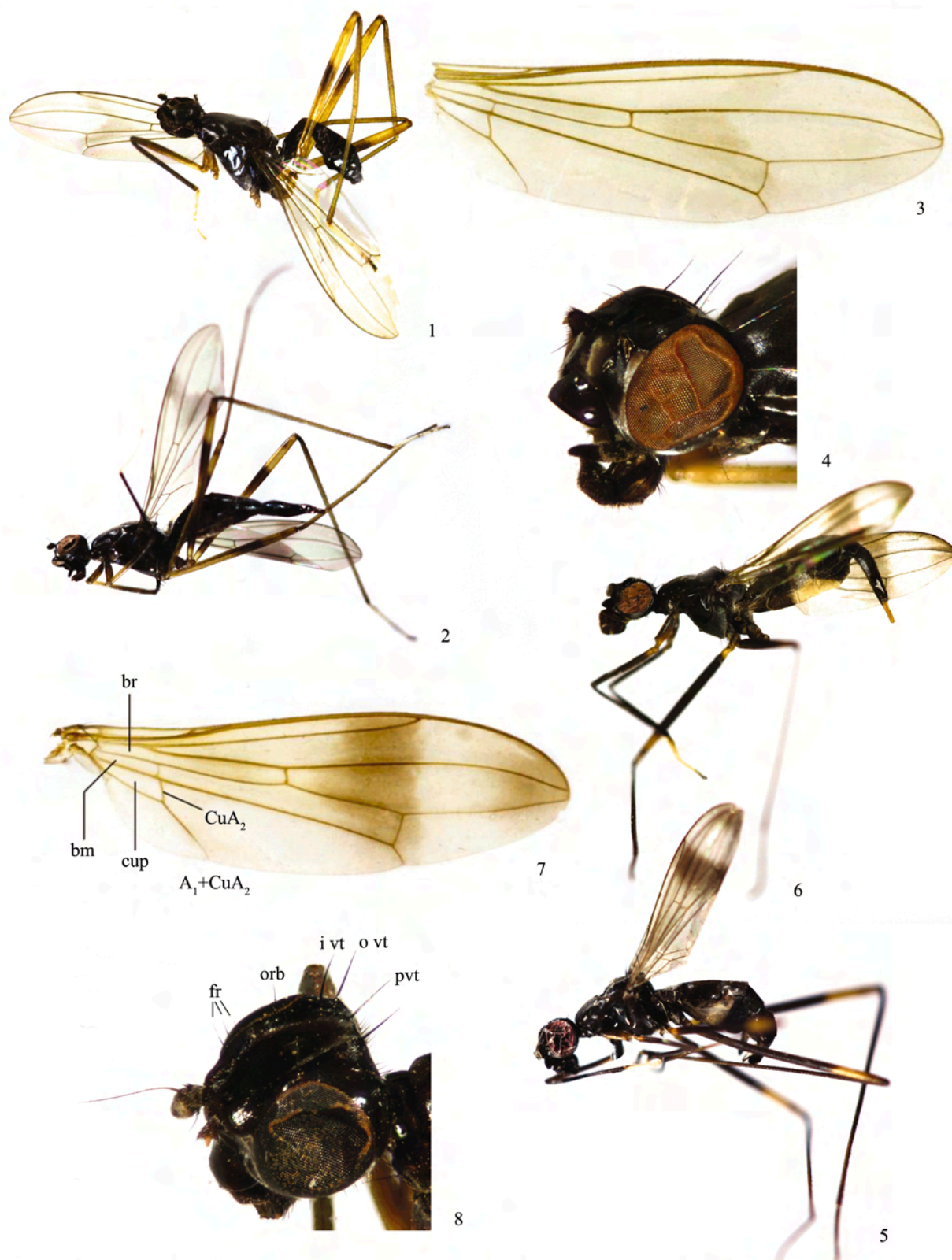
Diagnosis. 2 frontal bristles present; frontal vitta less than half of frons width. Mid and hind femora yellowish brown with middle brown ring. Wing with narrow grayish brown middle band, apical band indistinct; crossvein $bm-cu$ connected with CuA_2 ; CuA_2 slightly sinuate. Genital fork longer than basal portion of sternite 5.

Description. Male. Body length 11.0 mm, wing length 7.5 mm.

Head black with pale gray pollen; frontal vitta less than half frons width, with black tomentum. Hairs on head black; bristles black. 1 postvertical bristle, 1 inner vertical bristle, 1 outer vertical bristle, 1 weak orbital bristle, 2 frontal bristles. Antenna brownish black; pedicel with ventral apical bristle half as long as first flagellomere; first flagellomere 2 times longer than wide; arista bare, nearly 3 times as long as first flagellomere. Proboscis brownish black with yellow hairs; palpus black with black hairs.

* Corresponding author, E-mail: dyangcau@126.com, dyangcau@yahoo.com.cn

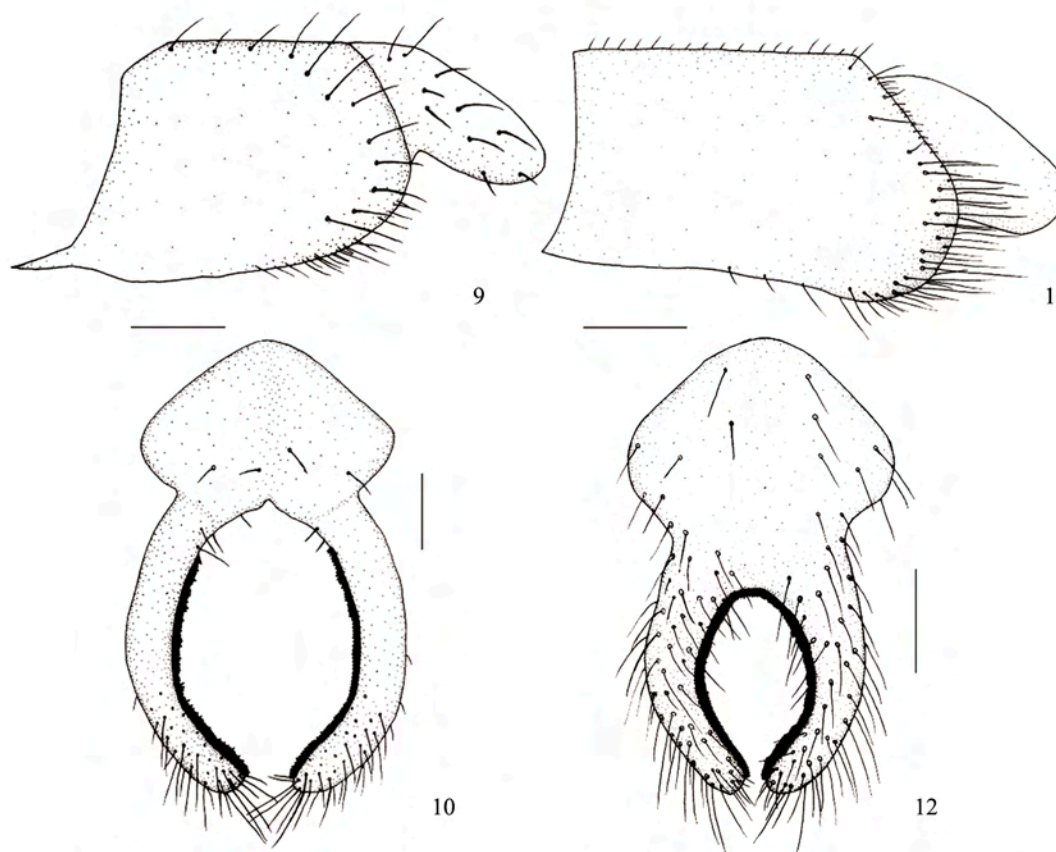
Received 10 Jan. 2012, accepted 15 Feb. 2012.



Figs 1 – 4. *Rainieria leucochira* Czerny, 1932. 5 – 8. *Rainieria trisetia* sp. nov. 1, 5. Habitus of male, lateral view. 2, 6. Habitus of female, lateral view. 3, 7. Wing. 4, 8. Head. Abbreviations: pvt = postvertical bristle; o vt = outer vertical bristle; i vt = inner vertical bristle; orb = orbital bristle; fr = frontal bristle.

Thorax brownish black, blue metal shining, and with pale gray pollen. Hairs and bristles black. 2 notopleural bristles, 1 dorsocentral bristle, 1 supra-alar

bristle, 1 postalar bristle, 1 apical scutellar bristle; hypopleuron with some long, strong, brownish black bristles. Legs mainly yellowish brown, except fore



Figs 9 – 10. *Rainieria leucochira* Czerny, 1932. Figs 11 – 12. *Rainieria trisetata* sp. nov. 9, 11. Hypopygium, lateral view. 10, 12. Genital fork, ventral view. Scale bars: 9, 11 = 0.15 mm; 10, 12 = 0.2 mm.

femur brown, mid and hind femora with middle brown ring; fore tarsus white, mid and hind tarsi faint yellow. Hairs and bristles on legs black, but bristles of white parts becoming white. Wing nearly hyaline with narrow grayish brown middle band, apical band indistinct; veins brown, crossvein bm-cu connected with CuA_2 , CuA_2 slightly sinuate; vein $A_1 + Cu_2$ reaching wing margin. Haltere dark brown with knob nearly black.

Abdomen brown with pale gray pollen, except tergites mostly yellowish brown and genital fork of sternite 5 black. Hairs on abdomen black, except those on tergite 1 white; tergites black microsetulose. Sternite 2 with a small, round, prominent bulge. Genital fork longer than basal portion of sternite 5, with long black hairs outside and black serrate plates inside, serrations of two feet not connected in the top. Epandrium without surstylus.

Female. Body length 10 mm, wing length 7 mm. Similar to male. Ovipositor yellowish brown except apex dark yellow, 4 times as long as wide.

Specimens examined. 1 male, 1 female, Yunnan, Tengchong, 31 May 2007, LIU Xing-Yue.

Distribution. Oriental realm: China (Yunnan, Taiwan).

Remarks. This species is recorded from Chinese mainland for the first time.

***Rainieria trisetata* sp. nov.** (Figs 5 – 6, 11 – 12)

Diagnosis. 3 frontal bristles present, frontal vitta nearly half as wide as frons. Mid and hind femur brown with basal and apical yellowish brown ring. Wing with broad grayish brown middle band and apical band. Crossvein bm-cu not connected with CuA_2 , but more close to wing base; CuA_2 slightly sinuate. Genital fork nearly as long as basal portion of sternite 5.

Description. Male. Body length 9 mm, wing length 7 mm.

Head dark brown. Hairs on head black; bristles black. 1 postvertical bristle, 1 inner vertical bristle, 1 outer vertical bristle, 1 orbital bristle, 3 frontal bristles; frontal vitta nearly half as wide as frons, with black tomentum. Pedicel with apical ventral bristle longer than first flagellomere; first flagellomere 1.5 times as long as wide; arista nearly 3 times as long as first flagellomere, with some short and weak hairs at base. Proboscis brownish black with yellow hairs; palpus black with dark brown hairs.

Thorax dark brown with pale gray pollen. Hairs and bristles black. 2 notopleural bristles, 1 dorsocentral bristle, 1 supra-alar bristle, 1 postalar bristle, 1 apical scutellar bristle; hypopleuron with some long and strong bristles. Legs brown, except

fore coxa yellowish brown, mid and hind femora with basal and apical yellowish brown ring, and fore tarsus white. Hairs and bristles on legs black, but bristles of white parts becoming white. Wing nearly hyaline with broad grayish brown middle band and apical band; veins brown. Crossvein bm-cu not distal to crossvein CuA_2 , but more close to wing base, crossvein CuA_2 slightly sinuate; vein $A_1 + Cu_2$ reaching wing margin. Haltere yellow brown with knob brownish black.

Abdomen brown with pale gray pollen; tergites mostly dark brown; tergite 2 brown, posterolateral corners black; tergite 3 yellowish brown basally and laterally, posterolateral corners of tergite 3 black but otherwise brown; distal tergites dark brown except for brown epandrium; genital fork of sternite 5 black. Hairs on abdomen black, except those on tergite 1 white; tergites black microsetulose. Genital fork nearly as long as basal portion of sternite 5, with long black hairs outside and black serrate plates inside, serrations of two feet connected in the top. Epandrium without surstylus.

Female. Body length 8.5 mm, wing length 7.0 mm. Similar to the male. Ovipositor yellowish brown with base black and apex dark yellow, 4.4 times as long as wide.

Holotype male, Liaoning, Kuandian, Danhua Mountain, 13 July 2009, WANG Jun-Chao. Paratype 1 male, Heilongjiang, Maoer Mountain, 23 June 1984.

中国绒瘦足蝇属记述 (双翅目, 瘦足蝇科)

李轩昆 刘星月 杨 定*

中国农业大学昆虫学系 北京 100193

摘 要 首次报道绒瘦足蝇属 *Rainieria* 在我国大陆有 2 种分布, 描述新种三鬃绒瘦足蝇 *Rainieria triseta* sp. nov., 重新描述亮翅绒瘦足蝇 *Rainieria leucochira* Czerny, 并编制我国绒瘦足蝇属分种检索表。

三鬃绒瘦足蝇, 新种 *Rainieria triseta* sp. nov. (图 5~8, 11

关键词 双翅目, 瘦足蝇科, 绒瘦足蝇属, 新种, 中国.

中图分类号 Q969.44

Distribution. Palaearctic realm: China (Liaoning, Heilongjiang).

Remarks. This new species is peculiar and easily separated from other member of the genus by the head with 3 frontal bristles. It can be also separated from *R. leucochira* Czerny by the following features; mid and hind femur brown with basal and apical yellowish brown ring; wing grayish brown with a broad middle and apical yellowish brown band; crossvein bm-cu not connected with CuA_2 , but more close to wing base; 3 frontal bristles present; genital fork of sternite 5 nearly as long as basal portion of sternite 5 (Czerny, 1932).

Etymology. The specific name refers to the number of frontal bristles.

REFERENCES

- Czerny, L. 1932. Tyriden und Neriiden des Zoologische Museums in Hamburg. (Diptera). *Stettiner Entomologische Zeitung*, 93: 267–302.
Hennig, W. 1938. Tyriden Aus Japan. *Insecta Matsumurana*, 13: 1–14.
Marshall, S. A. 2010. Micropezidae. In: Brown, B. V. et al. (eds.), *Manual of Central American Diptera*. NRC Research Press, Ottawa. 2: 805–813.
Rondani, C. 1843. Quattro specie di insetti ditteri proposti come tipi di genere nuovi. Memoria sesta per servire alla ditterologia italiana. *Nuovi Annali delle Scienze Naturali. Bologna*, 10: 32–46.
Soós, Á. 1984. Family Micropezidae. In: Soós, Á. and Papp, L. (eds.), *Catalogue of Palaearctic Diptera*. Elsevier Science Publishers & Akademiai Kiado, Amsterdam & Budapest. 9: 19–24.
Steyskal, G. C. 1977. Family Micropezidae. In: Delfinado, M. D. and Hardy, D. E. (eds.), *A Catalog of the Diptera of the Oriental Region*. The University Press, Hawaii. 3: 12–20.

~12)

新种独特, 头部具 3 根眶鬃, 容易与本属其他种区分。

正模 ♂, 辽宁宽甸大华山, 2009-07-13, 王俊潮采。副模 1 ♂, 黑龙江帽儿山, 1984-06-23。

词源: 新种种名意指头部眶鬃数目。

* 通讯作者, E-mail: dyangcau@126.com, dyangcau@yahoo.com.cn